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* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  MAY 01  New CAS web site launched
 NEWS  3  MAY 08  CA/CAplus Indian patent publication number format defined
 NEWS  4  MAY 14  RDISCLOSURE on STN Easy enhanced with new search and display
                  fields
 NEWS  5  MAY 21  BIOSIS reloaded and enhanced with archival data
 NEWS  6  MAY 21  TOXCENTER enhanced with BIOSIS reload
 NEWS  7  MAY 21  CA/CAplus enhanced with additional kind codes for German
                  patents
 NEWS  8  MAY 22  CA/CAplus enhanced with IPC reclassification in Japanese
                  patents
 NEWS  9  JUN 27  CA/CAplus enhanced with pre-1967 CAS Registry Numbers
 NEWS 10  JUN 29  STN Viewer now available
 NEWS 11  JUN 29  STN Express, Version 8.2, now available
 NEWS 12  JUL 02  LEMBASE coverage updated
 NEWS 13  JUL 02  LMEDLINE coverage updated
 NEWS 14  JUL 02  SCISEARCH enhanced with complete author names
 NEWS 15  JUL 02  CHEMCATS accession numbers revised
 NEWS 16  JUL 02  CA/CAplus enhanced with utility model patents from China
 NEWS 17  JUL 16  CAplus enhanced with French and German abstracts
 NEWS 18  JUL 18  CA/CAplus patent coverage enhanced
 NEWS 19  JUL 26  USPATFULL/USPAT2 enhanced with IPC reclassification
 NEWS 20  JUL 30  USGENE now available on STN
 NEWS 21  AUG 06  CAS REGISTRY enhanced with new experimental property tags
 NEWS 22  AUG 06  BEILSTEIN updated with new compounds
 NEWS 23  AUG 06  FSTA enhanced with new thesaurus edition
 NEWS 24  AUG 13  CA/CAplus enhanced with additional kind codes for granted
                  patents

 NEWS EXPRESS  29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

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 NEWS IPC8     For general information regarding STN implementation of IPC 8

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DICTIONARY FILE UPDATES:  15 AUG 2007  HIGHEST RN 944769-12-4

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=> s 25494-88-6/rn
L1           1 25494-88-6/RN

=> d

L1    ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2007 ACS on STN
RN    25494-88-6  REGISTRY
ED    Entered STN:  16 Nov 1984
CN    β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI)
      (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN    β-Carotene-4,4'-dione, 3,3'-dihydroxy-, diacetate, all-trans- (8CI)
OTHER NAMES:
CN    all-trans-(3S,3'S)-Astaxanthin diacetate
CN    Astaxanthin 3,3'-diacetate
CN    Astaxanthin diacetate
FS    STEREOSEARCH
DR    2485-58-7, 69350-55-6, 5800-87-3
MF    C44 H56 O6
LC    STN Files:   BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, SPECINFO, USPATFULL
          (*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry as shown.

                                                                PAGE 1-A
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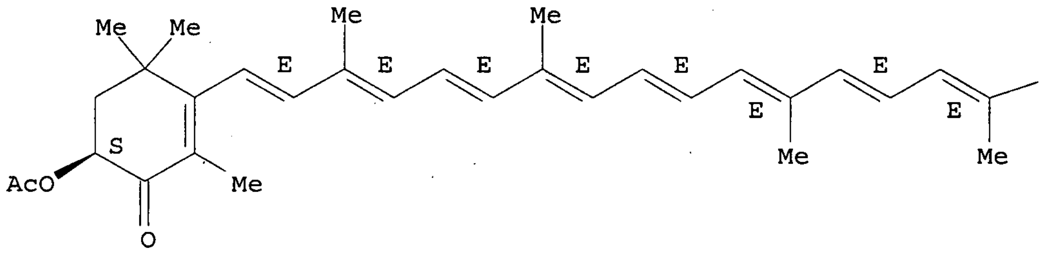

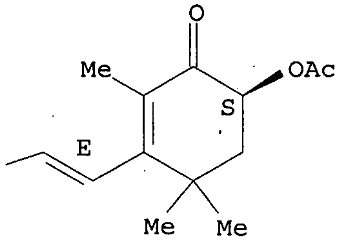

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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

              13 REFERENCES IN FILE CA (1907 TO DATE)
              13 REFERENCES IN FILE CAPLUS (1907 TO DATE)


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COST IN U.S. DOLLARS                             SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    2.40       2.61

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FILE LAST UPDATED: 15 Aug 2007  (20070815/ED)

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L6   ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         1995:657594  CAPLUS
DOCUMENT NUMBER:          123:56329
TITLE:                    Improved process for preparation of astaxanthin
INVENTOR(S):              Ernst, Hansgeorg; Paust, Joachim; Dobler, Walter;
                          Rheude, Udo
PATENT ASSIGNEE(S):       BASF A.-G., Germany
SOURCE:                   Ger. Offen., 11 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     DE 4430289           A1    19950309    DE 1994-4430289        19940826 <--
     FR 2709490           A1    19950310    FR 1994-10366          19940829 <--
     FR 2709490           B3    19951027
     JP 07082246          A     19950328    JP 1994-211529         19940905 <--
PRIORITY APPLN. INFO.:                      DE 1993-4329954     A1 19930904
OTHER SOURCE(S):          CASREACT 123:56329; MARPAT 123:56329
GI   For diagram(s), see printed CA Issue.
AB   Astaxanthin (I) was prepd from the alc. II or the acetate III (R = AcO) in
     an improved process.  Thus, II was treated with 47% HBr in methylene
     chloride and the product III (R = Br) was treated with Ph3P to give the
     crystalline phosphonium bromide, which underwent Wittig reaction with
     2,7-dimethylocta-2,4,6-trien-1,8-dial to give astaxanthin.
IT   25494-88-6P
     RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic
     preparation); PREP (Preparation); RACT (Reactant or reagent)
        (improved process for preparation of astaxanthin)
RN   25494-88-6  CAPLUS
CN   β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI)
     (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

                                                        PAGE 1-A
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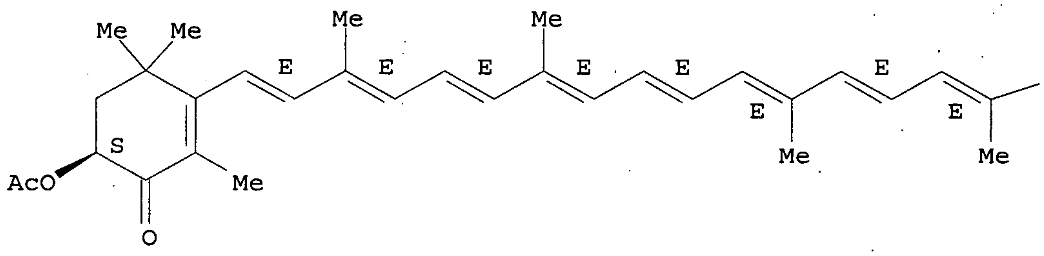

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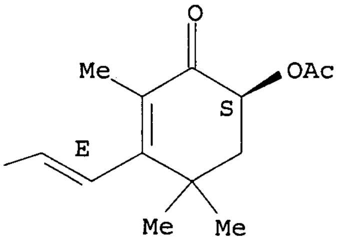


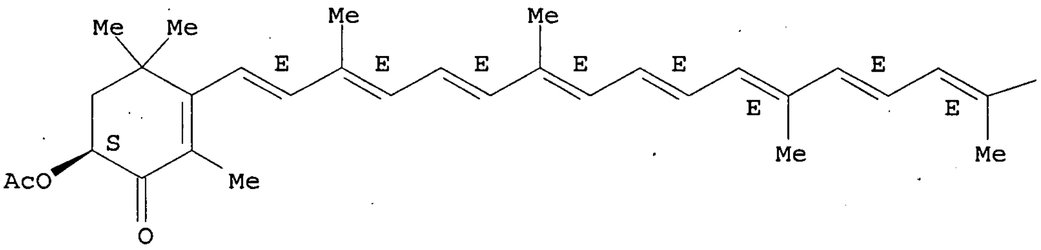
L6 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:3493 CAPLUS
DOCUMENT NUMBER: 118:3493
TITLE: Algal carotenoids. 51. Secondary carotenoids 2. Haematococcus pluvialis aplanospores as a source of (3S,3'S)-astaxanthin esters
AUTHOR(S): Grung, Merete; D'Souza, Frances M. L.; Borowitzka, Michael; Liaaen-Jensen, Synnove
CORPORATE SOURCE: Norw. Inst. Technol., Univ. Trondheim, Trondheim, N-7034, Norway
SOURCE: Journal of Applied Phycology (1992), 4(2), 165-71
CODEN: JAPPEL; ISSN: 0921-8971
DOCUMENT TYPE: Journal
LANGUAGE: English

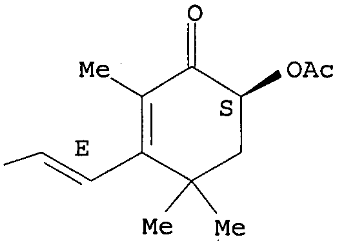
AB Aplanospores of H. pluvialis MUR 145 contained 0.7% carotenoids (dry weight basis) consisting of β,β-carotene (5% of total carotenoid), echinenone (4%), canthaxanthin (4%), (3S,3'S)-astaxanthin diester (34%), (3S,3'S)-astaxanthin monoester (46%), (3S,3'S)-astaxanthin (1%) and (3R,3'R,6'R)-lutein (6%). The astaxanthin esters were examined by TLC and HPLC and visible, 1H NMR, and mass spectra recorded. Their chirality was determined by the camphanate method after anaerobic hydrolysis. The tough cell wall of the aplanospores required enzymic treatment prior to pigment extraction The potential use of this microalga as a feed ingredient in aquaculture is discussed briefly.

IT 25494-88-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(of Haematococcus pluvialis aplanospores, preparation and identification of)
RN 25494-88-6 CAPLUS
CN β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A





L6 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	1979:138054 CAPLUS
DOCUMENT NUMBER:	90:138054
TITLE:	Synthesis of optically active natural carotenoids and structurally related compounds. II. Synthesis of (3S,3'S)-astaxanthin
AUTHOR(S):	Kienzle, Frank; Mayer, Hans
CORPORATE SOURCE:	Pharm. Forschungsabt., F. Hoffmann-La Roche und Co. A.-G., Basel, Switz.
SOURCE:	Helvetica Chimica Acta (1978), 61(7), 2609-15 CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE:	Journal
LANGUAGE:	German

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB (3S,3'S)-astaxanthin (I, R = H) was prepared by hydrogenation of cyclohexenone II (R1 = C.tplbond.CCMe:CHCHO), reduction of II (R1 = R2, R3 = CHO), bromination of the alc. II (R1 = R2, R3 = CH2OH), substitution of II (R1 = R2, R3 = CH2Br with Ph3P, and condensation of II [R1 = (E,E)-CH:CHCMe:CHCH2P+Ph3.Br-] (III) with (E,E,E)-OCHCMe:CHCH:CHCH:CMeCHO. Condensing III with (E,E)-OCHCMe:CHC.tplbond.CCH:CMeCHO gave (3S,3S')-didehydroasataxanthin (IV), which was hydrogenated to (3S,3S')-cis-astaxanthin (V). (3S,3'S)-astaxanthin diacetate and dipalmitate (I, R = Ac, palmitoyl, resp.) were also prepared

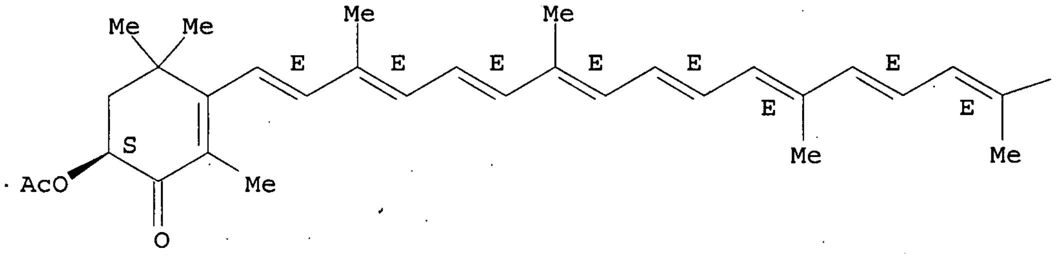
IT 25494-88-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 25494-88-6 CAPLUS

CN β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



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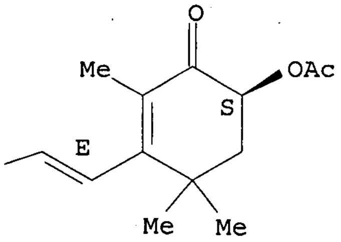


L6   ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

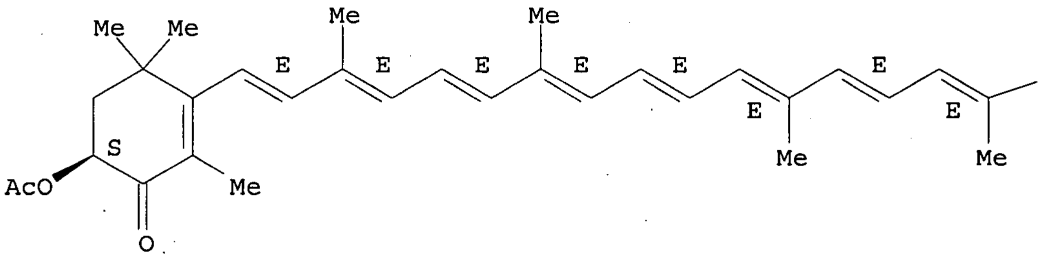
ACCESSION NUMBER:	1975:82658 CAPLUS
DOCUMENT NUMBER:	82:82658
TITLE:	Algal carotenoids. X. Carotenoids of the Dinophyceae
AUTHOR(S):	Johansen, J. E.; Svec, W. A.; Liaaen-Jensen, S.; Haxo, F. T.
CORPORATE SOURCE:	Norw. Inst. Technol., Univ. Trondheim, Trondheim, Norway
SOURCE:	Phytochemistry (Elsevier) (1974), 13(10), 2261-71 CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB   The carotenoids of the photosynthetic dinoflagellates Amphidinium carterae (2 strains), Glenodinium, Gymnodinium splendens, Gymnodinium nelsoni, and Gyrodinium dorsum have been investigated. Peridinin is the principal carotenoid in all species; also present are β-carotene, diadinoxanthin, dinoxanthin, pyrrhoxanthin, astaxanthin, peridininol, diatoxanthin, and pyrrhoxanthinol. New structures have been assigned to dinoxanthin and pyrrhoxanthin, while peridininol and pyrrhoxanthinol are new carotenoids not previously reported. A carotenoid glycoside, P-457, found in 4 species, is a hexoside. Dinoxanthin is the only plausible biosynthetic precursor of peridinin that could be detected.

IT   25494-88-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
RN   25494-88-6 CAPLUS
CN   β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI)
     (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



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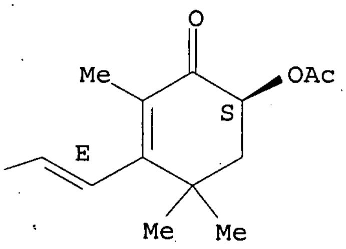


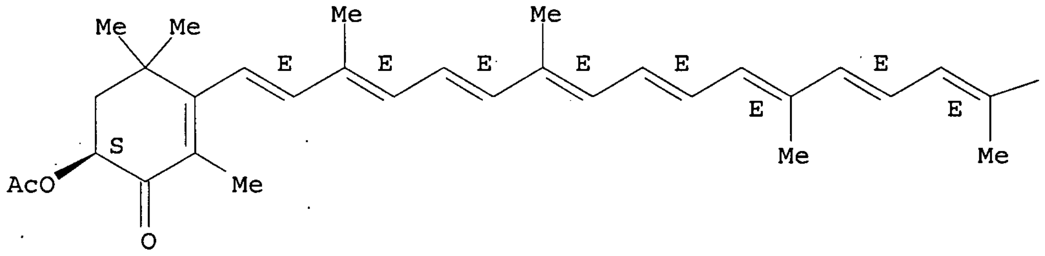
L6 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1970:21796 CAPLUS
DOCUMENT NUMBER: 72:21796
TITLE: Optical rotatory dispersion of carotenoids
AUTHOR(S): Bartlett, L.; Klyne, W.; Mose, W. P.; Scopes, Patricia M.; Galasko, G.; Mallams, A. K.; Weedon, B. C. L.; Szabolcs, J.; Toth, Gyula
CORPORATE SOURCE: Westfield Coll., London, UK
SOURCE: Journal of the Chemical Society [Section] C: Organic (1969), (18), 2527-44
CODEN: JSOOAX; ISSN: 0022-4952
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ORD curves of approx. 40 carotenoids were measured, chiefly in dioxane at 400-200 nm. The chromophore in all cases is a conjugated polyene system which is perturbed by one or two chiral end-groups. The curves are analyzed in terms of the simple additivity of the effects of end-groups, and the absolute configurations of several compds. were provisionally assigned.

IT 25494-88-6
RL: PROC (Process)
(optical rotatory dispersion of)
RN 25494-88-6 CAPLUS
CN β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



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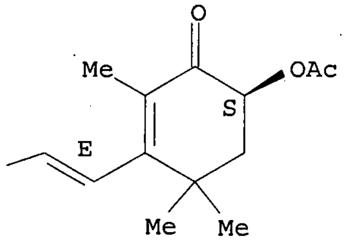

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L6   ANSWER 6 OF 6  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         1967:500271  CAPLUS
DOCUMENT NUMBER:          67:100271
TITLE:                    Pectenoxanthin, cynthiaxanthin, and a new acetylenic
                          carotenoid, pectenolone
AUTHOR(S):                Campbell, Sally A.; Mallams, A. K.; Waight, Eric S.;
                          Weedon, Basil C. L.
CORPORATE SOURCE:         Univ. London, London, UK
SOURCE:                   Chemical Communications (London) (1967),
                          (18), 941-2
                          CODEN: CCOMA8; ISSN: 0009-241X
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
GI   For diagram(s), see printed CA Issue.
AB   Halocynthia papillosa carotenoids were separated by thin layer chromatog.
     (TLC) on Kieselgel to give cynthiaxanthin (I), m. 188-90°.
     Acetylated carotenoids on Al2O3 gave the diacetates, m. 154-6°, of
     I, pectenolone (II), and astaxanthin m. 198-9°.  Pecten maximus
     gonad-acetylated carotenoids gave by TLC the diacetates of pectenoxanthin,
     m. 154-7°, and II.  The uv, ir, N.M.R. and mass spectral data of
     the separated products were given.  The structure of II was assigned as shown.
     Acetylated carotenoids of mussel showed on TLC, 2 main pigments, one m.
     150-2°, but no zeaxanthin.
IT   25494-88-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
RN   25494-88-6  CAPLUS
CN   β,β-Carotene-4,4'-dione, 3,3'-bis(acetyloxy)-, (3S,3'S)- (9CI)
     (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.
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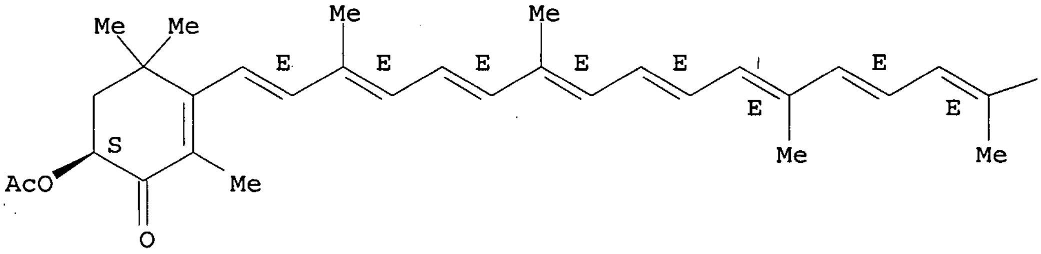
PAGE 1-A



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